Impact of Financial Technology on Financial Inclusion with reference to MSME Shoe Cluster in Uttar Pradesh

A

SYNOPSIS

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Submitted by

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1.0 Introduction

1.1 Financial Technology (Fintech)

Fintech is a combination of Finance and Technology. Fintech is an acronym for Financial Technology. When we use Smartphones and devices such as Laptops, Computers etc. along with Internet and latest/current/new technologies to carry out monetary operations, then that is known as Fintech. Fintech specifies the firms, utilizing/deploying latest/advanced/current technology to contest with conventional financial methods & "ABCD" (Artificial Intelligence, Blockchain, Cloud Computing AND Big Data) are considered as the four key areas of fintech. (Fintech, 2023). Fintech is a word that narrates the category of current/latest technologies planned to enhance and automatize the utilization and distribution of financial services, thereby making business transactions easy in the present scenario.

According to Gai, Keke & Qiu, Meikang & Sun, Xiaotong. (2017). "*As a new term in the financial industry, FinTech has become a popular term that describes novel technologies adopted by the financial service institutions. This term covers a large scope of techniques, from data security to financial service deliveries."*

Infact, Fintech is an Industry that deals with the unification of financial services and technology.

Fintech has been growing, evolving and progressing with the passage in time, the credit of which goes to makers of Mobile Applications such as Paytm, PhonePe, BHIM UPI etc. Fintech has been beneficial not only for individuals but also for the businessmen. Fintech is supporting financial institutions, business owners, companies, and consumers to manage their financial activities more efficiently/more competently/more skillfully/more proficiently (Dubey, 2019)

The favorable/bright/encouraging fintech sector in India is home to 20+ FinTech unicorns as of now/at present, which is expected to outstretch to $1 Tn in throughput and $200 Bn in revenue by 2030. (Shah, 2022)

Fintech Firms encompass startups and other companies that deploy technologies to perform the basic functions provided by financial services.

1.2 MSMEs

MSME is an acronym for Micro, Small AND Medium Enterprises.

The Ministry of Micro, Small and Medium Enterprises is the ministry in the Government of India, which

is the top executive body for the framing and administering the rules, regulations and laws relating to micro, small and medium enterprises in India. (Ministry of Micro, Small and Medium Enterprises, 2023) Below is a diagrammatic flow chart depicting the history of the Ministry of Micro, Small and Medium Enterprises in the chronological order:

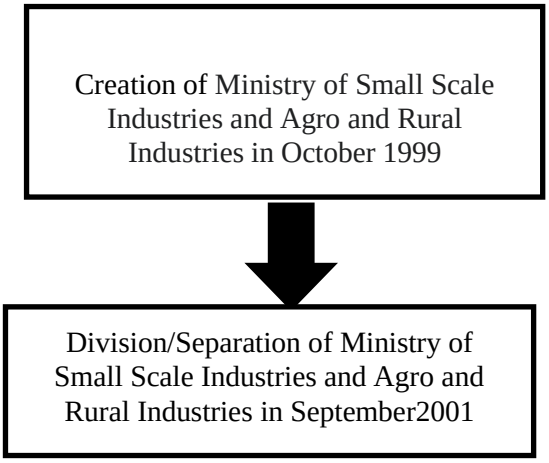
Creation of Ministry of Small Scale Industries and Agro and Rural Industries in October 1999
Division/Separation of Ministry of Small Scale Industries and Agro and Rural Industries in September2001

Figure 1:Diagrammatic representation of history of Ministry of Micro, Small and MediumEnterprises in the chronological order
(**Source:** Ministry of Micro, Small and Medium Enterprises. (2023, April 14). Retrieved from https://en.wikipedia.org/wiki/Ministry_of_Micro,_Small_and_Medium_Enterprises)

Table 1: Classification of Enterprises (Principal Trade in First Schedule of IDR Act, 1951)

Revised MSME CLASSIFICATION as per MSME ACT 2006 w.e.f. 01/07/2020			
Composite Criteria: INVESTMENT In PLANT & MACHINERY / EQUIPMENT And ANNUAL TURNOVER			
Classification	Micro Enterprises	Small Enterprises	Medium Enterprises
Manufacturing Enterprises and Services Enterprises	Investment in Plant and Machinery or Equipment: Not more than Rs. 1 Crore & Turnover: Not more than Rs. 5 Crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore & Turnover: Not more than Rs. 50 Crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 Crore & Turnover: Not more than Rs. 250 Crore

(**Source:** Website of MSME)

Table 2: No of MSMEs in Agra District

S. No.	TYPE OF INDUSTRY	NO. OF UNITS	INVESTMENT (Cr. Rs)	EMPLOYMENT
1	Agro-based	561	153.42	3384
2	Chemical/Chemical based	30	7.308	370
3	Electrical machinery and transport equipment	101	1.06	397

4	Engineering units	309	69.268	4150
5	Leather-based	932	156.089	11320
6	Metal-based	74	4.9	430
7	Mineral-based	13	0.27	27
8	Paper & Paper Products	60	12.52	612
9	Petha	470	7.8	2000
10	Ready-made garments & embroidery	857	9.68	4565
11	Repairing & servicing	2210	99.55	9212
12	Rubber, Plastic & petro based	89	22.376	2016
13	Wood/wooden based furniture	179	2.035	668
14	Woolen, silk & artificial Thread based clothes.	7	1.19	42
15	Others	1324	80.065	11926

(**Source:** MSME-Development Institute)

MSMEs have a good significance as they provide Employment/Job Opportunities at lower capital cost in comparison to/as compared to large industries, supports/aids to the Industrialization of rural & backward areas, perform the role of Ancillary Units for Large Industries AND contribute hugely to the socio- economic development of the country. (About the Ministry, 2020)

MSME Sector which constitutes one-third of the GDP of India has the possibility/potential/scope to grow in the future years/subsequent years. (IBEF, 2022)

The Indian MSME Sector has a huge variety with respect to/in terms of the size of the enterprises, variety of products and services produced and the levels of technology employed. (Verma, 2018)

1.3 Financial Inclusion

Financial Inclusion refers to including all people and providing all types of financial services to all types of people. In the same regard, our Hon'ble Prime Minister Shri Narendra Modi Ji has played a key role in rolling out schemes such as *Pradhan Mantri Jan Dhan Yojna* and other such schemes.

According to (Financial inclusion is a key enabler to reducing poverty and boosting prosperity., 2022) *"Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way."* According to Lyons, Angela & Grable, John & Zeng, Ting. (2017). "*Six elements of financial inclusion*" are:

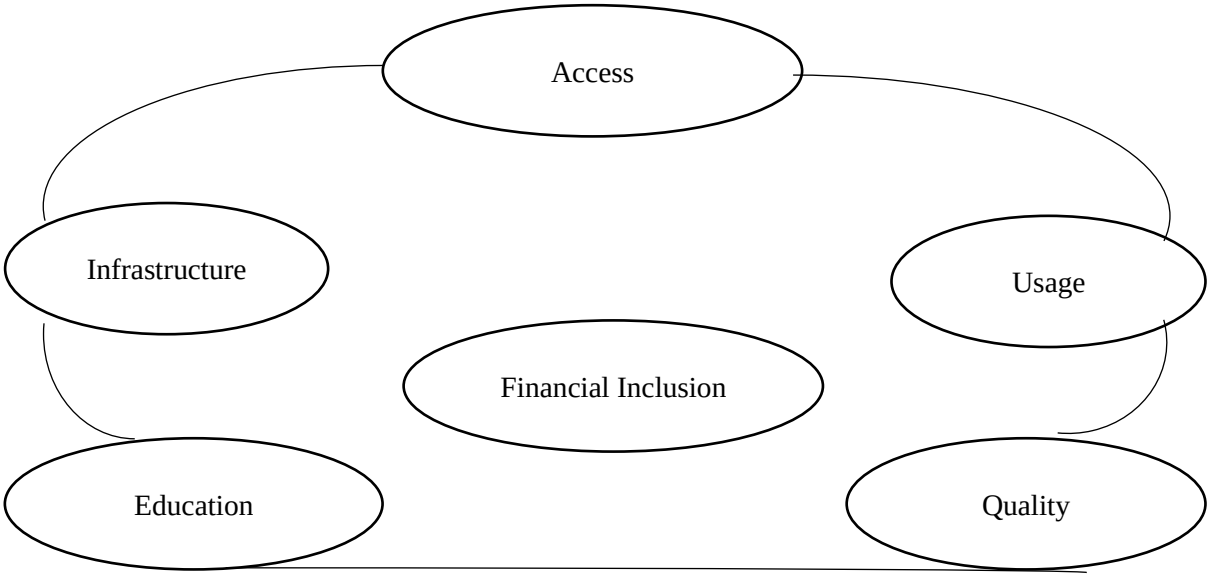

Figure 1: Six Elements of Financial Inclusion
(Source: Lyons, Angela & Grable, John & Zeng, Ting. (2017). Impacts of Financial Literacy on Loan Demand of Financially Excluded Households in China. SSRN Electronic Journal. 10.2139/ssrn.3075003.)

The various schemes that have been launched/introduced by our Hon'ble Prime Minister with regard to Financial Inclusion are discussed below: (Important Schemes, 2023)

1. Pradhan Mantri Jan Dhan Yojana

This scheme was declared by our Hon'ble Prime Minister on 15th August 2014, which aimed at/focused on ensuring broad/complete/overall financial inclusion of all the individuals and families in the nation by providing universal access to all banking amenities. In this scheme, a person not owing a Savings Account, can open an account with the essential/necessity of any minimum balance. Hence/Therefore PMJDY provides unbanked persons easy access to banking facilities and amenities and cognizance/knowledge about financial products through financial literacy programmes and campaigns.

2. From Jan Dhan to Jan Suraksha

Our Hon'ble Prime Minister introduced/initiated three Social Security Schemes in the Insurance and Pension sectors on 9th of May, 2015 focusing on generating/designing a universal social security system for all the countrymen of India.

3. Pradhan Mantri Jeevan Jyoti Bima Yojana

This scheme is available/accessible to all individuals who fall under the age bracket of 18-50 yearsowing a Bank Account, who give their assent/permission consent to join / enable auto-debit. Aadhar is the

major KYC for the bank account. The life cover of Rs 2 lakhs is for the durationof one year starting from 1st June and ending on 31st May and is renewable. This scheme providesa risk coverage of Rs 2 Lakhs in the scenario of demise of the insured, irrespective of any reason/cause.

4. Pradhan Mantri Suraksha Bima Yojana

This scheme is available/accessible to all individuals who fall under the age bracket of 18-70 yearsowing a Bank Account, who give their assent/permission consent to join / enable auto-debit. Aadhar is the major KYC for the bank account. The life cover of Rs 2 lakhs is for the durationof one year starting from 1st June and ending on 31st May and is renewable. This scheme providesa risk coverage of Rs 2 Lakhs in the scenario of accidental death and full disability. This schemeprovides a risk coverage of Rs 1 Lakhs in the scenario of partial disability.

5. Atal Pension Yojana

This scheme was introduced/initiated on 9th May 2015. This scheme is available/accessible to all individuals falling under the age bracket of 18-40 years owing a saving bank/post office saving bank account and the contributions vary. Subscribers of this scheme would receive the guaranteed minimum monthly pension of Rs. 1,000 or Rs. 2,000 or Rs. 3,000 or Rs. 4,000 or Rs. 5,000 at the age of 60 years.

6. Pradhan Mantri Mudra Yojana

This scheme was introduced/initiated on 8th April 2015. In this scheme a loan upto the value of Rs50,000 is sanctioned under sub-scheme *Shishu*, between Rs. 50,000 to 5.0 Lakhs under sub- scheme *Kishore* and between 5.0 Lakhs to 10.0 Lakhs under sub-scheme *Tarun*. In the scheme of*Pradhan Mantri Mudra Yojana,* collaterals are not needed for Loans.

7. Stand Up India Scheme

This scheme was introduced/initiated on 5th April 2016, by the Government Of India. This Scheme provides Bank Loans between Rs.10 lakh and Rs.1 crore to at least one Scheduled Caste/ Scheduled Tribe borrower and at least one Woman borrower per bank branch for the purpose of establishing greenfield enterprises.

8. Pradhan Mantri Vaya Vandana Yojana

This scheme was introduced/initiated by the Government Of India to save/safeguard elderly persons who are 60 years old from drop/slump/decline in their interest income in time ahead as/and also to

provide social security during old age. This scheme is executed/applied/administered by (LIC) and is open for subscription upto 31st March, 2023.

1.4 Financial Technology (Fintech) & Financial Inclusion

(Agarwal, 2022) threw light on the below mentioned areas:

1. Indian fintech landscape

According to (Agarwal, 2022) "Undoubtedly, India has become one of the largest growing economies in the world in recent years. Its growth is majorly fueled by the emerging startup hub, and FinTech has emerged as one of the biggest hotspots. The industry has steered massiveadoption of convenient go-to financial platforms with the growing availability of smartphones, increased internet access and technology penetration in non-metro areas."

(Agarwal, 2022) mentioned that the timespan of 2019-2022 has been revolutionary for the FintechIndustry as the outcome of the lockdowns that happened due to COVID-19 was the huge/enormous/gigantic acceptance of digitalization.

2. Government's role in fintech growth

(Agarwal, 2022) mentioned that the basic aim/objective of demonetization was to curb the exchange of black money, but it created a turmoil/discord across the country, which resulted in a movement of consumers to online financial services thereby boosting the potential of the FinTech industry

(Agarwal, 2022) mentioned that in addition to the above that the breakout of the COVID-19 pandemic accelerated the journey of FinTech in India with people accepting digital payments,contactless and paperless solutions as of no choice.

(Agarwal, 2022) mentioned that despite the fact India is a highly scattered country, a huge portionof the Indian Population does not have access to bank account and other financial services.

According to (Agarwal, 2022) "The RBI is adopting various solutions to constantly change the regulatory environment and solve challenges that can uplift the sector. In recent years, the Indian financial landscape has seen a major improvement in its infrastructure with the launch of Unified Payments Interface (UPI), Bharat Interface for Money (BHIM), and many others. Ithas been further pushed by the launch of 'Digital India' and 'Make in India' campaigns, aligned with the RBI's vision to accelerate FinTech adoption. The adoption is majorly driven by RBI's effort in pushing and enabling

the growing use of electronic payments in building a cashless society. According to the stats – the April to June 2022 quarter recorded a huge 20.57 billion transactions, estimated at Rs. 36.08 trillion in terms of value via several fintech platforms including UPI, debit and credit cards, mobile wallets, etc.*"*

3. Digital lending landscape in India

(Agarwal, 2022) mentioned all over/all around the decade of 2010-2020 numerous socioeconomicfactors have led to the commending/praising/advantageous growth of the Indian digital lending market.

(Agarwal, 2022) mentioned that the Indian digital lending market is set to grow at a CAGR of22 per cent from $270 billion in 2022 and become a $1.3 trillion market opportunity by 2030.

2.0 Literature Review

2.1 Fintech:

POPESCU, A.-D. (2019), examined various studies which concentrate on the attributes of Fintech, aiming to provide a combination/union/fusion of ways in which it impacts/affects/effects/influence financial inclusion

Kandpal, V., & Mehrotra, R. (2019), discussed about the positive impact of digital and technological revolution on business operations, appreciated the efforts of Indian Government & RegulatoryInstitutions taken for Fintechs, threw light on the challenges that will stop/hinder customers from adopting new financial technologies AND recommended the necessary measures that should be taken to make new financial technologies successful. The researchers stated that, Policies & Governance in Financial and Banking Sector will need to match/contest with the pace of innovation in Financial and Banking Sector, especially/specially to ensure secure and translucent growth.

Singh, S., Sahni, M.M., & Kovid, R.K. (2020) suggested a research framework to scrutinize FinTech adoption and use from the viewpoint of technology acceptance by adding sub-constructs of technology acceptance model (TAM), unified theory of acceptance and use of technology (UTAUT), ServPerf and WebQual 4.0. The researchers propsed that digital behavior (Internet experience and level of awareness) and demographic characteristics (age and gender) moderated the main relationships.

Najib, M., & Fahma, F. (2020) aimed at analyzing factors affecting the digital payment system adoption in SMEs, especially small and medium-sized restaurants, for which an extended Technology Acceptance Model (TAM) was used as a theoretical framework.

Ahmad, M. (2018) aimed at featuring the importance of the TAM model in explaining system adoption and usage in Internet banking and Mobile banking.

Hassan, M. U., Iqbal, A., & Iqbal, Z. (2018) examined the factors that affect the adoption of internet banking in Pakistan through the theoretical lenses of technology acceptance model (TAM) and theory of planned behaviour (TPB).

Hu, Z., Ding, S., Li, S., Chen, L., & Yang, S. (2019) proposes an improved technology acceptance model (TAM) that includes user innovativeness, government support, brand image, and perceived risk as determinants of trust to look into how users adopt Fintech services.

Wojcik, D. (2020), analyzed/examined interdisciplinary research(es) related to/associated to the actual and possible/likely outcomes of Fintech, with emphasis on ideas from and for geographers, and three areas: financial sector and centres, financial regulation and stability, and financial inclusion and governance. The Researcher showcased that the outcomes of Fintech are full of disputes/arguments which are part of broader, long-standing debates on the role of finance in economy and society, and need to be approached from geographical perspectives. The intense fusion of fin and tech, arguably accelerated by the COVID-19 pandemic, makes these arguments more complex and takes/raises/upraise these arguments to a new level.

Isaac Appiah-Otoo, & Song, N. (2021), inspired by the first agenda of Sustainable Development Goals set by the United Nations in 2015, i.e. (Ending poverty in all its forms by 2030) investigated the direct and indirecteffect/impact/affect of financial technology (fintech) and its sub-measures of third-party payment andcredit on poverty measured by household per capita consumption.

Nathan, R. J., Setiawan, B., & Quynh, M. N. (2022), Examined financial literacy,fintech adoption, and the impact of the COVID-19 crisis on the financial health of consumers in Vietnam

Utami, N. (2023) aimed at observing and analyzing that how the adoption of FinTech and financial literacy affect the development of Indonesia's MSMEs

Gupta, U., Agarwal, B., & Nautiyal, N. (2022) aimed at analyzing the role of financial technology on registered MSMEs in India

2.2 Financial Inclusion:

Riwayati, H. E. (2017), discussed the impact/effect/affect/influence of the factors, (viz: human resource

aspect, financial aspect, production technique/operational aspects, and market and marketing aspects AND government policy, socio-cultural and economic aspects, and aspects of the role of related institutions) on: the success of SMEs gem stone artisans in Magelang Regency, Indonesia, SME's financial inclusion AND Direct Financial Inclusion. According to Riwayati, H. E. (2017), "*financial inclusion of business actors is able to mediate the influence of internal factors and external factors on the success of SMEs, gem stone artisans in Magelang Regency, Indonesia*." Riwayati, H. E. (2017), also discusses role of financial inclusion in increasing the success of SMEs.

Mhlanga, D. (2020), focused on examining the effect/impact/affect/influence of Artificial Intelligence on Digital Financial Inclusion. AI has a strong impact on digital financial inclusion in the following aspects: risk detection, measurement and management, addressing the problem of information asymmetry, availing customer support and helpdesk through chatbots and fraud detection and cybersecurity.

Joia, L. A., & Cordeiro, J. P. V. (2021), examines the potential/ability of fintechs to enable financial inclusion in emerging markets, recognized/picked out/spotted out the domains related to fintechs that have the potential to impact/affect/influence financial inclusion & recognized and explained the roadblocks/basic regulatory enablers that can be used to guide the development of an appropriate regulatory framework for fintechs

Velazquez, P. V., Bobek, V., Vide, R. K., & Horvat, T. (2022) analyzed/examined the impact/influence/effect/affect of selected FinTech companies on financial inclusion in their respective countries to learn of/from their business models and country environmentsthat can help/aid to Peruvian financial inclusion/Financial Inclusion in Peru

Pandey, A., Kiran, R., & Sharma, R. K. (2022), scrutinized/checked/looked into/studies the success level accomplished by India in attaining financial inclusiveness by examining the effect/impact of the drivers of financial inclusion (FI), financial literacy, and financial initiatives on sustainable growth, examines the impact/affect/influence of the drivers of Financial Inclusion(FI) on sustainable growth through the mediation of financial literacy, primarily tries to understand that whether mediation assists in enhancing the impact/affect/influence of the drivers of FI on sustainable growth, examines the impact/affect/influence of the drivers of FI, financial literacy, and financial initiatives on sustainable

growth AND evaluates direct impact/affect/influence of the drivers of FI on sustainable growth and the indirect effect through the mediation of financial literacy

Lema, A. (2017) examined the factors influencing the adoption of mobile financial services in the unbanked population

2.3 Fintech & Financial Inclusion

Badruddin, A. (2017), aimed at studying the following: a. Latest Evolutions In Fintech, b. role of technology in micro finance delivery model, c. vital distribution technologies for financial inclusion AND d. challenges arouse due to technology. Badruddin, A. (2017), concluded that: a. India has a vast potential for achieving financial inclusion by implementing Fintech. The current scenario is evident about the effectiveness of the Fintech AND b. Inspite of the fact that, there are challenges associated with Demand Of Fintech & Supply Of Fintech,the Government is making/taking endeavors/attempts to facilitate the supply side of Fintech with the technology led environment AND on the other side endeavors/attempts are being made/taken on the demand side of Fintech for accepting and assessing the Fintech in order to get included.

Rahmi, M. (2018), aimed at investigating the potential impact of Fintech to the progress offinancial inclusion in Indonesia. The arising, evolving and growing Fintech Industry in Indonesia is expected to bring favorable/beneficial impact to Indonesia's economic growth. Although in general it provides numerous opportunity (ies) Fintech is totally essential to increase the levelof financial inclusion in Indonesia which later will have massive consequences on the overall Indonesia's economy. The future success of Fintech growth in Indonesia definitely/understandably is based on effectual governance by the Government and OJK as well, implying that any threat/danger associated with new digital providers and products must be well anticipated and skillfully controlled/administered/regulated/supervised. Efficient regulation promote transparency, reduce the risk of fraud, and cybercrime; these will encourage confidence in the society that can boost fintech adoption.

Jaya, I. M. L. M. (2019), aimed at discovering the impact/effect/influence/affect of financial inclusion on public financial services education through financial technology.

Siddiqui, T. A., & Siddiqui, K. I. (2020), stated that Telecom plays a crucial part in expanding financial services to rural areas and in supporting people to make their lives/living better

Moufakkir, M., & Mohammed, Q. (2020), aimed at highlighting the concept of FinTech, a technological innovation in the financial field, providing an overview of the financial technologies use evolution, as a business model, and to highlight how FinTech contribute to enhance the financial and social inclusion, by providing convenient and accurate digital financial services (DFS) to the excluded population

Arner, D. W., Buckley, R., Zetzsche, D., & Veidt, R. (2020), argued that financialtechnology (FinTech) is the key driver for financial inclusion, which in turn underlies sustainable balanced development, as embodied in the UN Sustainable Development Goals (SDGs) and suggested a progressive approach to the development of underlying infrastructure to support digital financial transformation to realize the full potential of FinTech to support the SDGs.

Hussein, H. (2020), recognized/picked out/spotted out the preparedness of the Government of Egyptto innovate in leveraging financial technology and new technologies to achieve financial inclusion. According to Hussein, H. (2020), "Despite Government's efforts, fintech startups booming in various industries in parallel of high internet and mobile phones penetration, research results andstatistical analysis using multiple logistic regression showed that Egypt's has low rank of financial inclusion among African and Arab states.*"*

Barruetabeña, E. (2020),narrated/explained/detailed the main/major advantages of financial innovation, particularly in emerging economies & recognized/pointed out the main hurdles/objections/ threats, related with financial innovation, including the potential effects of digitalisation on financial exclusion & feasible/practicable methods to address these

Pambudianti, F. F. R., Purwanto, B., & Maulana, T. N. A. (2020), Stated that technical efficiency has a much smaller value than the efficiency of intermediation with a strategy required to improve business optimization and steer clear from any conditions of constant to return. In addition, factors considered in the strategy-making are loan period which has a positive effect onthe business efficiency and non-performing loans that are not affected by intermediacy efficiency as well as strategies to improve the index of financial inclusion as targeted by the Financial Services Authority through the Strategy National Financial Inclusion.

Brij,R., & Upadhyay,V. (2020), took the stock of the technological revolution that is shaping the future of finance in India and the important role FinTechcan play in accelerating Financial Inclusion in India.

Hasanul Banna, M. K. (2021), explored/considered/examinedthat if a higher degree of fintech-based financial inclusion (FFI) Increases/raises banks' risk-taking. They explored/considered/examined the relation between fintech-based financial inclusion (FFI) andthe impact of the fourth industrial revolution (IR4.0) on bank risk-taking.

Folwarski, M. (2021), Aimed at examining the impact/affect/effect of FinTech factors on the financial inclusion of the society in EU countries.

Alwi, S., Salleh, M. N. M., Alpandi, R. M., Ya'acob, F. F., & Abdullah, S. M. M. (2021), focused on the factors that will affect/affecting our behavorial intent to implement mobile e-wallet post COVD-19 outbreak and concluded that the variable 'perceived ease of use' had the most significant impact towards the intention of consumers to adopt the mobile e-wallet, followed by the variable 'health precaution' which had the next highest significant relationship with thebehavioral intention to adopt mobile e-wallet. With the safety measures taken to prevent from the COVID-19, it was strongly recommended by the health professionals to reduce the use of cash. Thus, mobile e-wallet is suitable/appropriate for a situation like COVID-19.

Odei-Appiah, S., Wiredu, G., & Adjei, J.K. (2022), focused at examining/scrutinizing the impact/effect/influence/affect of the use of Fintech on Financial Inclusion in the middle of/among/surrounded by the scenario of digital divide.

Goswami, S., Sharma, R. B., & Chouhan, V. (2022), examined the Critical Success Factors (CSFs) affecting/stimulating/encouraging the acceptance/adoption of disruptive financial technology for financial inclusion in rural India.

Ashenafi, B. B., & Dong, Y. (2022), discussed the impact/effect/affect/influence of Financial Inclusion & Fintech on Income Inequality, told us/discussed about the determinants of Financial Inclusion AND discussed/explained the way in which Fintech promotes Financial Inclusion

Ioannou, S., & Wojcik, D. (2022), stated that:

a. inspite of the fast growth driven by high costs of financial intermediation, policy of financial inclusion and financial regulation, FinTech in Latin America has thus far played out on the margins of the global FinTech industry and the margins of its financial systems, with limited impacts on financial inclusion

b. argued that FinTech has not challenged but contributed to an already high level of concentration in the geographies of financial services in Latin America. This is affected by the closeness of FinTech firms to incumbent banks (which are active in FinTech), sources of capital and skilled labour, and reinforced by the fact that leading financial centres in Latin America are also the main centres of technology industry.

c. FinTech has not yet had a significant impact on the low level of financial integration in Latin America, with fragmentation determined by political, economic, and financial instability combined with a lack of compatibility in financial regulation.

Puri, A. P., Tiovandy, V., & Sandy, R. (2022), were inclined towards finding out/determining the impact/affect/influence/effect of financial technology on the development of financial inclusion on MSMEs in North Sumatera.

"1. Risk and Investment Management variable did not affect financial inclusion, the P2P Lending variable affects financial inclusion (financial knowledge), P2P Lending and Cashless Society variables had a significant positive effect on financial inclusion (financial knowledge). In contrast, Risk and Investment Management and Market Provisioning did not substantially impact financial inclusion (financial knowledge) in MSMEs in North Sumatra."

Apostu, S. A., Mirela, P., Vasile, V., & Sharma, G. D. (2022), Aimed at identifying the stage of development of Fintech in the Balkan countries given the existence of numerous influencing factors Fintech is present in the Balkan countries, with a landscape colorfully generated by the different factors as the involvement of public authorities, the EUmembership of only a few countries, the level of financial and digital education of the population

Demir, A., Pesqué-Cela, V., Altunbaş, Y., & Murinde, V. (2020), examined the interrelationship between FinTech, financial inclusion, and income inequality for a panel of 140 countries , posit that FinTech affects inequality directly and indirectly through financial inclusion, discovered that Financial Inclusion is a key medium through which Fintech reduces Income Equality , discussed that financial inclusion significantly reduces inequality at all quantiles of the inequality distribution, these effects are primarily associated with higher-income countries, discussed about and explained the cause due to which poor people are unable to escape poverty, discussed about the role and importance of Fintech

with reference to Financial Inclusion, explained that how Fintech affects inequality, explained the role of Fintech in curtailing down the problem of Income Inequality AND discussed about the role & impact/affect/influence of financial inclusion with reference to/on inequality.

Kanga, D., Oughton, C., Harris, L., & Murinde, V. (2021), examined the spread/dispersal of financial technology (fintech) and its interaction with financial inclusion and living standards (GDP per capita) , considered the determinants and effects of technology diffusion in financial services and identified two possible transmission mechanisms from the financial sector to GDP per capita – a fintech diffusion channel and a financial inclusion channelAND specified the interactions between these two channels and their relationship with income per capita. The Empirical Analysis of the Researchers have concentrated on the diffusion of two enabling fintech innovations: ATMs and associated digital networks; and mobile phones and payments systems.

Morgan, P. (2022), examined/explored/scrutinized the developments/evolutions of financial inclusion and Fintech in the Association of Southeast Asian Nations (ASEAN) member countries and India to recognize/point out/spot the ways that Fintech is contributing and can potentially/likely/possibly contribute to increased financial inclusion. This paper also analyzed/scrutinized/investigated/inspected the possible/likely threats arising/emerging from the usage of Fintech, highlighted/underlined the differences/dissimilarities/gaps in the strategies/approaches and implementation/application of financial inclusion and Fintech between India and ASEAN AND drew lessons and policy recommendations from these findings.

Table 3: Synthesized Matrix Of Literature Review

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
1	Joia, Luiz & Cordeiro, Joaquim.	Unlocking the Potential of Fintechs for Financial Inclusion: A Delphi-Based Approach.	Brazil	✓				✓	✓		✓			2021	Sustainability.	Examines the potential/ability of fintechs to enable financial inclusion in emerging markets, recognized/picked out/spotted out the domains related to fintechs that have the potential to impact/affect/influence financial inclusion & recognized and explained the roadblocks/basic regulatory enablers that can be usedto guide the development of an appropriate regulatory framework for fintechs
2	Jaya, I Made.	The Impact of Financial Inclusion on Public Financial Services Education through Financial Technology in Sleman Regency, Indonesia.	Sleman Regency, Indonesia	✓				✓				✓		2019	Esensi: Jurnal Bisnis dan Manajemen.	a. Financial Inclusion had no significant impact on public financial services education, b. financial inclusion has proven to have a significant impact on financial technology in Sleman Regency in 2018 AND c. financial inclusion through financial technology has also proven to have a positive impact on public financial service education in Sleman Regency in 2018.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
3	Birhanu, Biruk& Dong, Yan.	Financial Inclusion, Fintech, and IncomeInequality in Africa.	Africa	✓				✓				✓		2022	FinTech.	Discussed the impact/effect/ affect/influence of Financial Inclusion & Fintech on Income Inequality, told us/discussed about the determinants of Financial Inclusion AND discussed/ explained the way in which Fintech promotes Financial Inclusion
4	Riwayati HE	Financial inclusion of business players in mediating the success ofsmall and medium enterprises in Indonesia.	Indonesia	✓				✓			✓			2017	International Journal of Economics and Financial Issues	Discussed the impact/effect/ affect/influence of the factors, (viz: human resource aspect, financial aspect, production technique /operational aspects, and market and marketing aspects AND government policy, socio-cultural and economic aspects, and aspects of the role of related institutions) on: the success of SMEs gem stone artisans in Magelang Regency, Indonesia, SME's financial inclusion AND Direct Financial Inclusion.
5	Utami,Novia	Analysis of the Use of Financial Technology and Financial Literacy Among MSMEs	Indonesia	✓				✓		✓				2023	MBIA	Aimed at observing and analyzing that how the adoption of FinTech *and* financial literacy affect the development of Indonesia's MSMEs

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
6	Ismaail, Hossam.	The Impact of Financial Technology on FinancialInclusion: The Case of Egypt.	Egypt	✓				✓				✓		2020	IOSR Journal of Economics and Finance (IOSR-JEF)	Recognized/picked out/spotted out the preparedness of the Government of Egypt to innovate in leveraging financial technology and new technologies to achieve financial inclusion.
7	Rahmi, Mustika.	Fintech for Financial Inclusion: Indonesia case.	Indonesia	✓				✓				✓		2019	Advances in Economics, Business and Management Research	The arising, evolving and growing Fintech Industry in Indonesia is expected to bring favorable/ beneficial impact to Indonesia's economic growth. Although in general it provides numerous opportunity(ies) Fintech is totally essential to increase the level of financial inclusion in Indonesia which later will have massive consequences on the overall Indonesia's economy.
8	Ioannou, S., & Wójcik, D.	The limits to FinTech unveiled by the financial geography of Latin America.	Latin America	✓							✓			2022	Geoforum	a. inspite of the fast growth driven by high costs of financial intermediation, policy of financial inclusion and financial regulation, FinTech in Latin America has thus

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																far played out on the margins of the global FinTech industry and the margins of its financial systems, with limited impacts on financial inclusion b.argued that FinTech has not challenged but contributed to an already high level of concentration in the geographies of financial services in Latin America. This is affected by the closeness of FinTech firms to incumbent banks (which are active in FinTech), sources of capital and skilled labour, and reinforced by the fact that leading financial centres in Latin America are also the main centres of technology industry. AND c.FinTech has not yet had a significant impact on the low level of financial integration in Latin America, with fragmentation determined by political, economic, and financial instability combined

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																with a lack of compatibility in financial regulation.
9	Velazquez, Patricia Vilcanqui, Vito Bobek, Romana Korez Vide, and Tatjana Horvat.	Lessons from Remarkable FinTech Companies for the Financial Inclusion in Peru.	Peru	✓			✓	✓		✓				2022	Journal of Risk and Financial Management	Analyzed/examined the impact/influence/effect/affect of selected FinTech companies on financial inclusion in their respective countries to learn of/from their business models and country environments that can help/aid to Peruvian financial inclusion/Financial Inclusion in Peru
10	Najib, M., & Fahma, F.	Investigating the Adoption of Digital Payment System through an Extended Technology Acceptance Model: an Insight from the Indonesian Small and Medium Enterprises	Indonesia	✓			✓		✓					2020	International Journal on Advanced Science Engineering Technology	aimed at analyzing factors affecting the digital payment system adoption in SMEs, especially small and medium-sized restaurants, for which an extended Technology Acceptance Model (TAM) was used as a theoretical framework.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
11	Ahmad, M.	Review of The Technology Acceptance Model (TAM) in Internet banking and Mobile banking		✓				✓	✓					2018	International Journal of Information Communication Technology and Digital Convergence	aimed at featuring the importance of the TAM model in explaining system adoption and usage in Internet banking and Mobile banking.
12	Hassan, M. U., Iqbal, A., & Iqbal, Z.	Factors affecting the adoption of internet banking in Pakistan: an integration of technology acceptance model and theory of planned behaviour	Pakistan	✓			✓		✓					2018	International Journal of Business Information Systems	examined the factors that affect the adoption of internet banking in Pakistan through the theoretical lenses of technology acceptance model (TAM) and theory of planned behaviour (TPB)
13	Hu, Z., Ding, S., Li, S., Chen, L., & Yang, S.	Adoption Intention of Fintech Services for Bank Users: An Empirical Examination with an Extended Technology Acceptance Model		✓			✓		✓					2019	Symmetry	Proposed an improved technology acceptance model (TAM) that includes user innovativeness, government support, brand image, and perceived risk as determinants of trust to look into how users adopt Fintech services.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
14	Banna, Hasanul & Hassan, M. Kabir & Rashid, Mamunur.	Fintech-based financial inclusion and bank risk-taking: Evidence from OICcountries.	24 OIC Countries	✓			✓				✓			2021	Journal of International Financial Markets, Institutions and Money.	explored/considered/examined that if a higher degree of fintech-based financial inclusion (FFI) Increases/raises banks' risk-taking. They explored/considered/examined the relation between fintech-based financial inclusion (FFI) and the impact of the fourth industrial revolution (IR4.0) on bank risk-taking.
15	Arie Pratania Putri, V. T.	THE IMPACT OF FINANCIAL TECHNOLOGY ON THE DEVELOPMENT OF FINANCIAL INCLUSIONON MSME.	North Sumatera	✓			✓				✓			2022	Jurnal Riset Akuntansi Kontemporer,	The variables of P2P Lending and Cashless Society have a significant positive effect on financial inclusion, while Risk and Investment Market Provisioning have no significant effect on financial inclusion.
16	Appiah-Otoo,I.; Song, N.	The Impact of Fintech onPoverty Reduction: Evidence from	China	✓			✓		✓					2021	Sustainability	Inspired by the first agenda of Sustainable Development Goals set by the United Nations in 2015, i.e. (Ending poverty in all its forms by 2030) investigated the direct and indirect effect/impact/affect of financial technology (fintech) and its sub-measures of third-party

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
		China														payment and credit on poverty measured by household per capita consumption. Fintech, Third-Party Payment and Credit curb poverty in China. fintech complements economic growth and financial development in order to reduce poverty in China. Results were robust at regional level.
17	Folwarski, Mateusz.	The FinTech sector and aspects on the financial inclusion of the society in EU countries.	EU countries	✓			✓				✓			2021	European Research Studies Journal	Aimed at examining the impact/affect/effect of FinTech factors onthe financial inclusion of the society in EU countries. FinTech sector has a significant impact on improving the financial inclusion of society in EU countries
18	Nathan, Robert Jeyakumar, Budi Setiawan, and Mac Nhu Quynh.	Fintech and Financial Health in Vietnam duringthe COVID-19	Vietnam	✓			✓		✓					2022	Journal of Risk and Financial Management	There is significant positive correlation between factors that promote fintech and fintech adoption in Vietnam. It shows that the community is digitally advanced and open for adoption of new innovations in the financial sector. Although the unbanked population data shows high unbanked

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
		Pandemic: In-Depth Descriptive Analysis														populations in Vietnam, this is probably due to the unaccounted number of people who may not use conventional banking services but have started using fintech services for their financial needs, which includes mobile payments. If the rising number of fintech users can be captured, this study believes that the currently reported high figures of unbanked populations in Vietnam could be reduced.
19	Apostu, Simona & Mirela, Panait & Vasile, Valentina & Sharma, Gagan & Vasile, Razvan. (2022).	FinTechs and financial inclusion—Balkan experience: Digital perspectives on financialmarkets	Balkan Countries	✓			✓				✓			2022	Electronic Journal Of Information Systems in Developing Countries	Balkan countries are not homogenous regarding Fintech and financial inclusion, the differences being generated both by the public policies in the financial field but also by IT development and by the population openness for using the new financial services and products.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
20	Kandpal, Dr Vinay & Mehrotra, Rajat.	FINANCIAL INCLUSION: THE ROLE OF FINTECH AND DIGITAL FINANCIAL SERVICES IN INDIA.	India		✓			✓	✓					2019	Indian Journal of Economics & Business	Discussed about the positive impact of digital and technological revolution on business operations, appreciated the efforts of Indian Government & Regulatory Institutions taken for Fintechs, threw light on the challenges that will stop/hinder customers from adopting new financial technologies AND recommended the necessary measures that should be taken to make new financial technologies successful. The researchers stated that, Policies & Governance in Financial and Banking Sector will need to match/contest with the pace of innovation in Financial and Banking Sector, especially/specially to ensure secure and translucent growth.
	Pandey, Amit& Kiran, Ravi & Sharma, Rakesh.	Investigating the Impact of Financial Inclusion Drivers, Financial Literacy and Financial												2022		Scrutinized/checked/looked into/studies the success level accomplished by India in attaining financial inclusiveness by examining the effect/impact of the drivers of financial inclusion (FI),

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
21		Initiatives in Fostering Sustainable Growth in North India.	North India		✓		✓			✓					Sustainability	financial literacy, and financial initiatives on sustainable growth, examines the impact/affect/influence of the drivers of Financial Inclusion(FI) on sustainable growth through the mediation of financial literacy, primarily tries to understand that whether mediation assists in enhancing the impact/affect/influence of the drivers of FI on sustainable growth, examines the impact/affect/influence of the drivers of FI, financial literacy, and financial initiatives on sustainable growth AND evaluates direct impact/affect/influence of the drivers of FI on sustainable growth and the indirect effect through the mediation of financial literacy
22	Raj, Brij and Upadhyay, Varun	Role of FinTech in Accelerating Financial Inclusion in India	India		✓			✓			✓			2020		Took the stock of the technological revolution that is shaping the future of finance in India and the important role FinTech can play in accelerating Financial Inclusion in

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																India.
23	Shubham Goswami , Raj Bahadur Sharma , Vineet Chouhan	Impact of Financial Technology (Fintech) on Financial Inclusion(FI) in Rural India.	Rural India		✓		✓				✓			2022	Universal Journal of Accounting and Finance	Examined the Critical Success Factors (CSFs) affecting/ stimulating/encouraging the acceptance/adoption of disruptive financial technology for financial inclusion in rural India, measured/analyzed/evaluated the impact/affect/influence of technology in promoting entrepreneurship in under-developed regions for future adoption of financial technology in rural areas, measured/ analyzed/ evaluated the impact /affect/ influence of Fintech in financial inclusion in Rural India, discusses about the impact/ affect/influence of factors constructing the social influence on behavioural intention to use manager technology in the rural sector in India, discusses about the impact/affect/influence

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																of factors constructing the social influence on behavioral intention to use manager technology in the rural sector in India, discusses about the connection between Factors affecting perceived ease of use towards using the financial technology AND system's usability and discusses about the impact/affect/influence of perceived ease of usetowards using the financial technology on system's usability.
24	Siddiqui, Taufeeque & Siddiqui, Kashif Iqbal.	FinTech in India: An analysis on impact of telecommunication on financial inclusion	Rural India		✓						✓			2020	StrategicChange	Telecom plays a crucial part in expanding financial services to ruralareas and in supporting people to make their lives/living better
25	Singh, S., Sahni, M.M., & Kovid, R.K.	What drives FinTech adoption? A multi-method evaluation using an adapted technology acceptance model	India		✓		✓	✓						2020	Management Decision	suggested a research framework to scrutinize FinTech adoption and use from the viewpoint of technology acceptance by adding sub-constructs of technology acceptance model (TAM), unified theory of acceptance and use of technology (UTAUT), ServPerf

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																and WebQual 4.0. The researchers propsed that digital behavior (Internet experience and level of awareness) and demographic characteristics (age and gender) moderated the main relationships.
26	Gupta, Upasana, Agarwal, Bhawna & Nautiyal,Neeraj.	Financial Technology Adoption — A Case of Indian MSMEs	India		✓		✓		✓					2022	Finance Theory and Practice	Aimed at analyzing the role of financial technology on registered micro, small and medium enterprises in India
27	Ozili, Peterson.	Impact of Digital Finance on Financial Inclusion and Stability.		✓				✓				✓		2018	Elsevier	Discussed about the advantages and disadvantages of Digital Finance, provides a discussion/discourse on digital finance and its implication for financial inclusion and financial stability AND threw light/featured some challenge/threat that digital finance pose for financial inclusion and financial stability, inspite of the advantages of Digital Finance.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
28	Ayse Demir & Vanesa Pesqué-Cela & Yener Altunbas & Victor Murinde	Fintech, financial inclusion and income inequality: a quantile regression approach		✓			✓				✓			2022	The European Journal of Finance	examined the interrelationship between FinTech, financial inclusion, and income inequality for a panel of 140 countries , posit that FinTech affects inequality directly and indirectly through financial inclusion, discovered that Financial Inclusion is a key medium through which Fintech reduces Income Equality , discussed that financial inclusion significantly reduces inequality at all quantiles of the inequality distribution, these effects are primarily associated with higher-income countries, discussed about and explained the cause due to which poor people are unable to escape poverty, discussed about the role and importance of Fintech with reference to Financial Inclusion, explained that how Fintech affects inequality, explained the role of Fintech in curtailing down the problem of Income Inequality AND discussed about the role &

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																impact/affect/influence of financial inclusion with reference to/on inequality.
29	Wójcik,Dariusz	Financial geography II: The impacts of FinTech –Financial sector and centres, regulation and stability, inclusion and governance		✓				✓	✓					2020	Progress in Human Geography	Analyzed/examined interdisciplinary research(es) related to/associated to the actual and possible/likely outcomes of Fintech, with emphasis on ideas from and for geographers, and three areas: financial sector and centres, financial regulation and stability, and financial inclusion and governance. The Researcher showcased that the outcomes of Fintech are full of disputes/arguments which are part of broader, long-standing debates on the role of finance in economy and society, and need to be approached from geographical perspectives. The intense fusion of fin and tech, arguably accelerated by the COVID-19 pandemic, makes these arguments more complex and

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																takes/raises/upraise these arguments to a new level.
30	Shaliza Alwi, M. N.	Fintech As Financial Inclusion: Factors Affecting Behavioral Intention To Accept Mobile E-Wallet DuringCovid-19 Outbreak.		✓			✓							2021	Turkish Journal of Computer and Mathematics Education	Focused on the factors that will affect/affecting our behavorial intent to implement mobile e-wallet post COVD-19 outbreak and concluded that the variable 'perceived ease of use' had the most significant impact towards the intention of consumers to adopt the mobile e-wallet, followed by the variable 'health precaution' which had the next highest significant relationship with the behavioral intention to adopt mobile e-wallet With the safety measures taken to prevent from the COVID-19, it was strongly recommended by the health professionals to reduce the use of cash. Thus, mobile e-wallet is suitable/appropriate for a situation likeCOVID-19

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
31	Barruetabeña, Esther	Impact of New Technologies on Financial Inclusion		✓			✓				✓			2020		Narrated/explained/detailed the main/major advantages of financial innovation, particularly in emerging economies AND recognized/pointed out the main hurdles/objections/ threats, related with financial innovation, including the potential effects of digitalisation on financial exclusion AND feasible/ practicable methods to address these
32	Mhlanga, David	Industry 4.0 in Finance: The Impact of Artificial Intelligence (AI) on Digital Financial Inclusion.		✓				✓		✓				2020	International Journal of Financial Studies	AI has a strong impact on digital financial inclusion in the following aspects: risk detection, measurement and management, addressing the problem of information asymmetry, availing customer support and helpdesk through chatbots and fraud detection and cybersecurity.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
33	Désiré Kanga, Christine Oughton, Laurence Harris & Victor Murinde	The diffusion of fintech, financial inclusion and income per capita		✓			✓				✓			2022	The European Journal of Finance	Examined the spread/dispersal of financial technology (fintech) and its interaction with financial inclusion and living standards (GDP per capita) , considered the determinants and effects of technology diffusion in financial services and identified two possible transmission mechanisms from the financial sector to GDP per capita – a fintech diffusion channel and a financial inclusion channel AND specified the interactions between these two channels and their relationship with income per capita. The Empirical Analysis of the Researchers have concentrated on the diffusion of two enabling fintech innovations: ATMs and associated digital networks; and mobile phones and payments systems.

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
34	Andrei-Dragoş Popescu	EMPOWERING FINANCIAL INCLUSION THROUGH FINTECH		✓				✓	✓					2019	Social Sciences and Education Research Review	Examined various studies which concentrate on the attributes of Fintech, aiming to provide a combination/union/fusion of ways in which it impacts/affects/effects/influence financial inclusion
35	Badruddin, Aisha.	Conceptualization of the Effectiveness of Fintech in Financial Inclusion.		✓				✓			✓			2018	International Journal of Engineering Technology Science and Research	Aimed at studying the following: a. Latest Evolutions In Fintech, b. role of technology in micro finance delivery model, c. vital distribution technologies for financial inclusion AND d. challenges arouse due to technology. This Research concluded that: a. India has a vast potential for achieving financial inclusion by implementing Fintech. The current scenario is evident about the effectiveness of the Fintech AND b. Inspite of the fact that, there are challenges associated with Demand Of Fintech & Supply Of Fintech, the Government is making/taking endeavors/attempts to facilitate the supply side of Fintech with the technology led

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																environment AND on the other side endeavors/attempts are being made/taken on the demand side of Fintech for accepting and assessing the Fintech in order to get included.
36	Moufakkir, Marouane & Qmichchou, Mohammed.	The Nexus Between FinTech Adoption and Financial Inclusion.		✓				✓			✓			2020	Impact of Financial Technology (FinTech) on Islamic Finance and Financial Stability	aimed at highlighting the concept of FinTech, a technological innovation in the financial field, providing an overview of the financial technologies use evolution, as a business model, and to highlight how FinTech contribute to enhance the financial and social inclusion, by providing convenient and accurate digital financial services (DFS) to the excluded population
37	Arner, Douglas & Buckley, Ross & Zetzsche, Dirk & Veidt, Robin.	Sustainability, FinTech and Financial Inclusion.		✓							✓			2020	European Business Organization Law Review	Argued that financial technology (FinTech) is the key driver for financial inclusion, which in turn underlies sustainable balanced development, as embodied in the UN Sustainable Development

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
																Goals (SDGs) and suggested a progressive approach to the development of underlying infrastructure to support digital financial transformation to realize the full potential of FinTech to support the SDGs
38	Odei-Appiah, Solomon & Wiredu, Gamel & Adjei, Joseph.	Fintech Use, Digital Divide and Financial Inclusion.		✓							✓			2021	Digital Policy, Regulation and Governance	The findings confirm a positive influence of FinTech use on financial inclusion as well as the influence of performance expectancy and facilitating conditions on behavioral intentions. The results also show that digital divide measured with access, resource and force moderate the use of FinTech.
39	Pambudianti, Feronica & Purwanto, Budi & Maulana, Tubagus. (2020).	The implementation of fintech: Efficiency of MSMEs loans distribution and users' financial		✓			✓				✓			2020	Jurnal Keuangan dan Perbankan	Technical efficiency has a much smaller value than the efficiency of intermediation with a strategy required to improve business optimization and steer clear from any conditions of constant to return. In addition, factors considered in the strategy-making are loan period which has a

S.No	Name	Title	Geographical Boundary Of Study	Type Of Study			Data Type			Focus Issue(s)				Year Of Publication	Journal/ Book OfPublication	Findings
				International	National Study	Conceptual	Conceptual	Quantitative	Qualititative	Fintech	Financial	Fintech &	Digital Finance			
		inclusion index														positive effect on the business efficiency and non-performing loans that are not affected by intermediacy efficiency as well as strategies to improve the index of financial inclusion as targeted by the Financial Services Authority through the Strategy National Financial Inclusion.
40	Lema, A	Factors influencing the adoption of mobile financial services in the unbanked population		✓			✓			✓				2017	Inkanyiso, Jnl Hum & Soc Sci,	examined the factors influencing the adoption of mobile financial services in the unbanked population

(Source: Author's own compilation)

2.4 Need Of The Study

In India, Fintech is an evolving space of research, in which less researches have been conducted in India, which serves as a rationale/justification for choosing Fintech as the Research Domain and choosing ***Impact of Financial Technology on Financial Inclusion: A Study with reference to MSME Owners in Uttar Pradesh*** as the Research Topic from the perspective of PhD Programme.

The literature reviewed by the researcher comprised only of a very few national studies, which discuss about Fintech, Financial Inclusion & Telecom.

Fintech is an evolving Industry, in which we are witnessing new advancements. The rate of adoption of Fintech is increasing day by day with reference to both: customers AND Business Enterprises. The Economic Survey 2022-23 stated that India acquired the 3rd place in digital payments only with the highest fintech adoption rate of 87% against the global average of 64%. (Sengupta, 2023). Today the normal public is using Mobile Wallet for making even a very small transaction. If we talk about the Business Enterprises, then all the Business Enterprises have made their own QR codes, through which the customers can pay to the Business Enterprises. The credit of the rate of adoption of Fintech with reference to both: customers & Business Enterprises goes to our Hon'ble Prime Minister Shri Narendra DamodarDas Modi for spreading awareness about Fintech and launching applications & initiatives like *BHIM, UPI* etc.

2.5 Research Gaps

After reviewing the literature, the following Research Gap(s) were discovered:

The literature reviewed by the researcher comprises of National Studies, but out of the all National Studiesreviewed by the researcher, no National Study has been conducted purely in Agra District.

In the literature reviewed by the researcher, very few research(es) have focused upon finding out/determining the impact/affect/influence/effect of financial technology on the development of financial inclusion on MSMEs in North Sumatera.

This research work will focus on finding out/determining the impact/affect/influence/effect of financial technology on the development of financial inclusion on MSMEs in Agra District

In the literature reviewed by the researcher, no research has focused upon the challenges stopping/preventing MSMEs from adopting new financial technologies.

This research work will focus on exploring the challenges stopping/preventing MSMEs from adopting newfinancial technologies with reference to Agra District.

After reviewing the literature, the researcher concluded that very few researches have been done that are related to SMEs/MSMEs.

3.0 Research Methodology

3.1 Research Objectives

1. To explore the challenges preventing MSMEs from adopting new financial technologies
2. To explore the advantages gained by MSMEs by using Financial Technologies
3. To analyze the impact of financial technology on the development of financial inclusion on MSMEs
4. To recommend a framework for widespread adoption of financial technologies for MSMEs

3.2 Research Variables

Table 4: Research Variables

S. No.	OBJECTIVES	VARIABLES OF STUDY
1	To explore the challenges preventing MSMEs fromadopting new financial technologies	Lack of technological infrastructure a. Lack of devices b. Lack of availability of technological softwares
		Lack of technical knowhow so as how to use modern devices and modern technology
		Fear Of Losing Privacy
2	To explore the advantages gained by MSMEs by using Financial Technologies	Financial Development of MSMEs
		Reduction in Time Of Transaction
3	To analyze the impact of financial technology on thedevelopment of financialinclusion on MSMEs	Easy & fast access to financing
		Smooth receipts & payments

(Source: Author's own compilation)

3.3 Conceptual Framework & Hypothesis

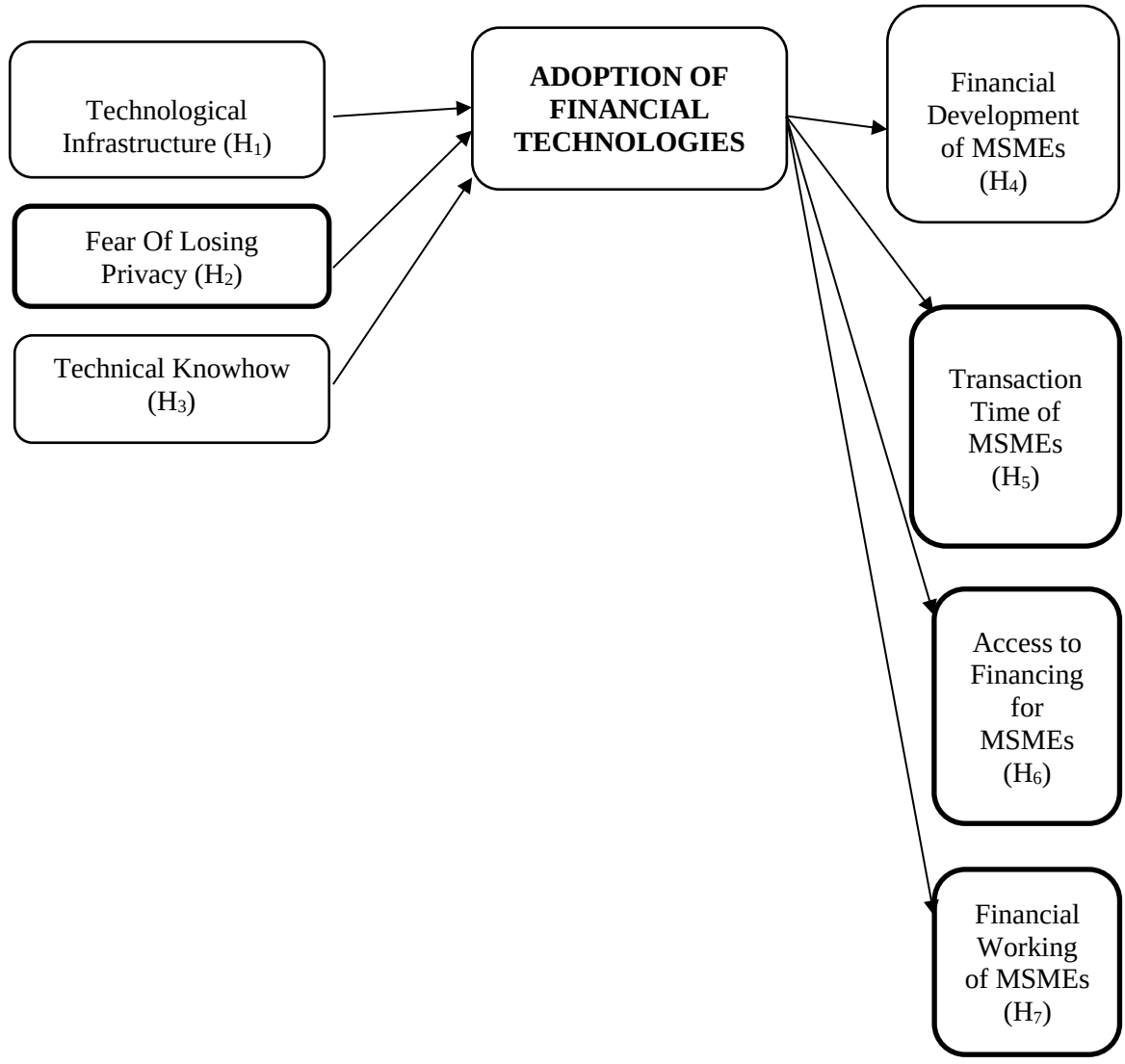
Technological Infrastructure (H_1)
Fear Of Losing Privacy (H_2)
Technical Knowhow (H_3)
ADOPTION OF FINANCIAL TECHNOLOGIES
Financial Development of MSMEs (H_4)
Transaction Time of MSMEs (H_5)
Access to Financing for MSMEs (H_6)
Financial Working of MSMEs (H_7)

Figure 3: Conceptual Framework
(**Source:** Author's own compilation)

Table 5: Hypothesis

S. No.	NULL HYPOTHESIS	ALTERNATE HYPOTHESIS
OBJECTIVE 1:		
H_1	Technological infrastructure has no significant impact on adoption of new financial technologies	Technological infrastructure has significant impact on adoption of new financial technologies
H_2	Fear of losing privacy has no significant impact on adoption of new financial technologies	Fear of losing privacy has significant impact on adoption of new financial technologies
H_3	Technological knowhow has no significant impact on adoption of new financial technologies	Technological knowhow has significant impact on adoption of new financial technologies
OBJECTIVE 2:		

H_4	Adoption of Financial technologies has no significant impact on the financial development of MSMEs	Adoption of Financial technologies has significant impact on the financial development of MSMEs
H_5	Adoption of Financial technologies has no significant impact on the transaction time of MSMEs	Adoption of Financial technologies has significant impact on the transaction time of MSMEs
OBJECTIVE 3:		
H_6	Adoption of Financial Technologies has no significant impact on access to financing for MSMEs	Adoption of Financial Technologies has significant impact on access to financing for MSMEs
H_7	Adoption of Financial Technologies has no significant impact on financial working of MSMEs	Adoption of Financial Technologies has no significant impact on financial working of MSMEs

(Source: Author's own compilation)

H_1 : Technological Infrastructure has no significant impact on adoption of new financial technologies

Technological Infrastructure is a combination of hard infrastructure and soft infrastructure, which includes proper devices AND proper Internet Connectivity. A firm which will have proper technological infrastructure, will be able to execute and adopt new financial technologies properly and vice versa which is the base for this hypothesis. However in today's scenario, there must be hardly a few firms/MSMEs that are facing the challenge of Lack of technological infrastructure, preventing that particular firm/MSME from adopting new financial technology(ies)

H_2 : Fear of losing privacy has no significant impact on adoption of new financial technologies

With the evolution of internet, in every domain, privacy is becoming a big risk/challenge, due to which people are concerned and not adopting the new inventions, the same stands good, when we discuss about Fintech, which is the base of this Hypothesis

H_3 : Technological Knowhow has no significant impact on adoption of new financial technologies

No matter, how good the technological evolution is, until and unless the firm/MSME does not know how to use and operate the technological evolution, it is of no use, assuming the firm/MSME has a good Technological Infrastructure, which is the base of this Hypothesis

H_4 : Adoption of Financial Technologies has no significant impact on the financial development of MSMEs

Fintech is of a great use for MSMEs as it provides many numerous advantages to MSMEs. Utami, N. (2023), in his research, entitled "Analysis of the Use of Financial Technology and Financial Literacy." has supported the same by stating that: Fintech influences the financial performance of MSMEs in Indonesia, Fintech has supported customers in making online payments, Fintech helps MSMEs to secure substantial amount of capital without visiting Bank(s) physically/in person AND Fintech can support/aid to those business owners (who have no access to Bank(s)) to expand their market and to reach new customers

H_5 : Adoption of Financial Technologies has no significant impact on the transaction time of MSMEs

Fintech will help MSMEs to reduce the transaction time of an economic transaction, the credit of which goes to the technology which is getting advanced day by day. Gupta, U. & Agarwal, B. & Nautiyal, Neeraj. (2022), in their research, entitled, "Financial Technology Adoption — A Case of Indian MSMEs" stated & proved that "Fintech Services reduces the time of transaction"

H_6 : Adoption of Financial Technologies has no significant impact on access to financing for MSMEs

Atina Shofawati, (2019) stated "The Role of Digital Finance to Strengthen Financial Inclusion and the Growth of SME in Indonesia is the availability of digital finance can create financial inclusion so the access for the financing is more easily especially for the SME which most of SME is not bankable"

H_7 : Adoption of Financial Technologies has no significant impact on financial working of MSMEs

Fintech will help the MSMEs to make the economic transactions in the form of receipts and payments, more fast and more effective (as compared to the earlier time, where an MSME used to execute all economic transactions in the form of receipts and payments in the form of hard cash), which will thereby reduce the credit burden of MSMEs (as compared to the earlier time, where an MSME used to delay sometimes in the payments to the creditors, suppliers etc. due to non-availability of hard cash). On the contrary, the MSMEs also will now be able to receive receipts more fast and more effectively from their receivables.

3.4 Research Methodology

In order to achieve the above said Research Objectives, the Researcher shall use the below stated Research Methodology

3.4.1 Area of Study- The Research will be conducted in Uttar Pradesh in two districts, viz. Agra and Kanpur, as the said districts are the only districts in Uttar Pradesh, where shoe production takes place in a good number

3.4.2 Population- In this research, the population is 5600 MSME Shoe Units, where 5000 MSMEs in Agra District and 600 MSMEs in Kanpur District fall in the category of shoe cluster (MSME-Development Institute, A. (. (n.d.). *Brief Industrial Profile Of District AGRA AND MSME Official)* which is a case of Finite Population.

Table 6: Shoe Cluster

1	Principal Products Manufactured in the Cluster	Leather Footwear
2	Name of the association	Agra Juta Laghu Udhyog Utpadan Samiti
3	No. of functional units in the clusters	5000 including 150 Exporters
4	Turnover of the Clusters	600 Lakh Pair/ annum
5	Value of Exports from the Clusters	Rs. 2150 Crore
6	Employment in the cluster	2 lakh
7	Average investment in plant & Machinery	1 Lakh (Except Exporting Units)
8	Major Issues	1) Shortage of Skilled Stichers 2) Working Capital 3) Shortage of Finished Leather 4) Infrastructural facilities 5) Govt. Policy
9	Presence of capable Institutions	CFTI, FDDI, GLI
10	Problems & Constrains	Skill Manpower, Shortage of Leather
11	Testing Needs Local Testing Needs are required	Units facing Hardships & testing from FFDI NOIDA

Source: MSME-Development Institute

a) **Sample Size-** Here, the **Sample Size is 298.**

Godden Formulae was used for calculating Sample Size , i.e. $\mathbf{SS = [Z^2p\ (1 - p)]/\ C^2}$ and $\mathbf{SS/\ [1 + \{(SS - 1)/Pop\}]}$, where: SS is the sample size, Z is the z-score, p is the population proportion, C is the Confidence Interval AND Pop is the population.

Z-Value was taken as 2.58, population proportion was taken as 0.05 AND confidence interval was taken as 0.01 where the Pop (population) is 5600.

Therefore, after inputting these values in the above mentioned formulae the researcher gets the below values.

$SS = [2.58^2 * 0.05 (1 - 0.05)] / 0.01^2$

$= 316$

AND

$316 / [1 + \{(316 - 1)/5600\}]$

$= 298$

The distribution of target respondents (area wise) from whom data will be collected is tabulated below:

Table 7: Geographical distribution of Target Respondents

S. No.	District	Number of Respondents
1	Agra	149
2	Kanpur	149

(Source: Author's own compilation)

b) **Sampling Method-** Systematic Random Sampling Method shall be adopted in this research where from every 5 MSME owners, 1 MSME owner will be selected with whom the questionnaire will be shared

c) **Sampling Frame-**List of all MSMEs working in Agra District and Kanpur District in Shoe Cluster

3.5 Sources Of Data Collection-Data shall be collected from 2 sources, viz:

- **Primary-**Primary Data is the fresh data that is not available/not accessible/unpublished. In this research,the researcher will collect Primary Data by providing Questionnaires to the Sample Target Respondents
- **Secondary-** Secondary Data is the data that is available/accessible/published on the Internet**.** Internet AND Research Papers. In this research, the researcher will collect Secondary Data from Internet AND Research Papers

3.6 Statistical Tools-Both types of statistical techniques i.e. Descriptive and Inferential Statistics will be used to get reliable results and inferences. Tools like Factor Analysis, Time Series Analysis, Regression Model, T-Test, ANOVA, Chi Square Test, etc. will be used for analyzing the data as per the nature of the data and requirement of the study

PROPOSED CHAPTERIZATION

Chapter 1-Introduction

I. Introduction

II. Need Of The Study

Chapter 2-Literature Review

I. Literature Review

II. Research Gaps

Chapter 3-Research Methodology

I. Research Objectives

II. Research Methodology

Chapter 4-Data Analysis

I. Data Analysis

II. Findings

Chapter 5-Conclusion

I. Conclusion

II. Scope for Future Research.

REFERENCES

1. Puri, A. P., Tiovandy, V., & Sandy, R. (2022). THE IMPACT OF FINANCIAL TECHNOLOGY ON THE DEVELOPMENT OF FINANCIAL INCLUSION ON MSME. *Jurnal Riset Akuntansi Kontemporer*, *14(1)*, 16–21.
2. Demir, A., Pesqué-Cela, V., Altunbaş, Y., & Murinde, V. (2020). Fintech, financial inclusion and income inequality: a quantile regression approach. *European Journal of Finance, 28(2)*, 86-107.
3. Badruddin, A. (2017). Conceptualization of the Effectiveness of Fintech in Financial Inclusion. *International Journal of Engineering Technology Science and Research*, *4*(7), 959–965.
4. Barruetabeña, E. (2020). Impact of New Technologies on Financial Inclusion. *International Journal of Engineering Technology Science and Research*, 14 pages.
5. Joia, L. A., & Cordeiro, J. P. V. (2021). Unlocking the Potential of Fintechs for Financial Inclusion: A Delphi-Based Approach. *Sustainability*, *13(21)*, 19 pages.
6. Kanga, D., Oughton, C., Harris, L., & Murinde, V. (2021). The diffusion of fintech, financial

inclusion and income per capita. *The European Journal of Finance*, *28*(6), 108-136.

7. Ashenafi, B. B., & Dong, Y. (2022). Financial Inclusion, Fintech, and Income Inequality in Africa. *Fintech, 1*, 376–387
8. Arner, D. W., Buckley, R., Zetzsche, D., & Veidt, R. (2020). Sustainability, FinTech and Financial Inclusion. *European Business Organization Law Review*, *21*(1), 7–35.
9. Pambudianti, F. F. R., Purwanto, B., & Maulana, T. N. A. (2020). The implementation of fintech: Efficiency of MSMEs loan distribution and users' index of financial inclusion. *Jurnal Keuangan dan Perbankan, 24(1),* 68-82.
10. Folwarski, M. (2021). The FinTech Sector and Aspects on the Financial Inclusion of the Society in EU Countries. *EUROPEAN RESEARCH STUDIES JOURNAL, 24*, 459-467.
11. Banna, H., Hassan, M. K., & Rashid, M. (2021). Fintech-based financial inclusion and bank risk-taking: Evidence from OIC countries. *Journal of International Financial Markets, Institutions and Money, 75(6).*
12. Hussein, H. (2020). The Impact of Financial Technology on Financial Inclusion: The Case of Egypt. *IOSR Journal of Economics and Finance (IOSR-JEF), 11(6),* 35-51.
13. Jaya, I. M. L. M. (2019). The Impact of Financial Inclusion on Public Financial Services Education through Financial Technology in Sleman Regency, Indonesia. *Jurnal Bisnis Dan Manajemen*, *9*(2), 155–174.
14. Gai, K., Qiu, M., & Sun, X. (2018). A survey on FinTech. *Journal of Network and Computer Applications, 103(1),* 262-273.
15. Mhlanga, D. (2020). Industry 4.0 in Finance: The Impact of Artificial Intelligence (AI) on Digital Financial Inclusion. *International Journal of Financial Studies, 8(3),* 14 pages.
16. Moufakkir, M., & Mohammed, Q. (2020). The Nexus Between FinTech Adoption and Financial Inclusion.
17. Morgan, P. (2022). Fintech and Financial Inclusion in Southeast Asia and India. *Asian Economic Policy Review, 17(2).*
18. PRANATA, N., SOEKARNI, M., MYCHELISDA, E., NOVANDRA, R., NUGROHO, AE, RIFAI, B., . . . YULIANA, RRD (2022). Technology Adoption Issues and Challenges for Micro, Small and

Medium Enterprises: A Case Study of the Food and Beverage Sub-Sector in Indonesia. *The Journal of Asian Finance, Economics and Business , 9* (3), 265–274.

19. Ozili, P. K. (2018). Impact of Digital Finance on Financial Inclusion and Stability. *Borsa Istanbul Review,18(4),* 329-340.
20. POPESCU, A.-D. (2019). EMPOWERING FINANCIAL INCLUSION THROUGH FINTECH. *Social Sciences and Education Research Review*, *6*(2), 198–215.
21. Purnamasari, A. S. (2023). THE INFLUENCE OF FINANCIAL TECHNOLOGY AND E-COMMERCE ON MSME INCOME IN SUMENEP. Jurnal Ekonomi, 503-507.
22. Julianto, P., Pasek, N. S., & Wiguna, Gd. N. H. (2021). Technology Acceptance Model Approach to Analysing the Use of Fintech in MSME Transactions in Buleleng. *Advances in Economics, Business and Management Research*, *197*, 5-11.
23. Rahmi, M. (2018). Technology Acceptance Model Approach to Analysing the Use of Fintech in MSME Transactions in Buleleng. *Advances in Economics, Business and Management Research*, *65*, 805–807.
24. Riwayati, H. E. (2017). Financial Inclusion of Business Players in Mediating the Success of Small and Medium Enterprises in Indonesia. *International Journal of Economics and Financial Issues*, *7*(4), 623–627
25. Nathan, R. J., Setiawan, B., & Quynh, M. N. (2022). Fintech and Financial Health in Vietnam during the COVID-19 Pandemic: In-Depth Descriptive Analysis. *Journal of Risk and Financial Management*, *15*(3), 19 pages.
26. Alwi, S., Salleh, M. N. M., Alpandi, R. M., Ya'acob, F. F., & Abdullah, S. M. M. (2021). Fintech As Financial Inclusion: Factors Affecting Behavioral Intention To Accept Mobile E-Wallet During Covid-19 Outbreak. *Turkish Journal of Computer and Mathematics Education*, *12*(7), 2130–2141.
27. Shofawati, A. (2019). The Role of Digital Finance to Strengthen Financial Inclusion and the Growth of SME in Indonesia. *KnE Social Sciences, 3*(13), 389–407.
28. Apostu, S. A., Mirela, P., Vasile, V., & Sharma, G. D. (2022). FinTechs and financial inclusion—Balkan experience: Digital perspectives on financial markets. *Electronic Journal of Information Systems in Developing Countries*.

29. Odei-Appiah, S., Wiredu, G., & Adjei, J.K. (2022), Fintech use, digital divide and financial inclusion, *Digital Policy, Regulation and Governance*, *24(5)*, 435-448.
30. Isaac Appiah-Otoo, & Song, N. (2021). The Impact of Fintech on Poverty Reduction: Evidence from China. *Sustainability*, 13 pages.
31. Utami, N. (2023). Analysis of the Use of Financial Technology and Financial Literacy. *Journal Management, Business, and Accounting , 22(1)*, 11-21.
32. Wojcik, D. (2020). Financial geography II: The impacts of FinTech – Financial sector and centres, regulation and stability, inclusion and governance. *Progress in Human Geography, 45(4)*, 878-889.
33. Ioannou, S., & Wojcik, D. (2022). The limits to FinTech unveiled by the financial geography of Latin America, *Geoforum*, *128*, 57-67.
34. Velazquez, P. V., Bobek, V., Vide, R. K., & Horvat, T. (2022). Lessons from Remarkable FinTech Companies for the Financial Inclusion in Peru. *Journal of Risk and Financial Management*, *15*(2), 46 pages.
35. Najib, M., & Fahma, F. (2020). Investigating the Adoption of Digital Payment System through an Extended Technology Acceptance Model: an Insight from the Indonesian Small and Medium Enterprises. *International Journal On Advanced Science Engineering Technology*, *10(4)*, 1702-1708.
36. Ahmad, M. (2018). Review of The Technology Acceptance Model (TAM) in Internet banking and Mobile banking. *International Journal of Information Communication Technology and Digital Convergence*, *3(1)*, 23-41.
37. Hassan, M. U., Iqbal, A., & Iqbal, Z. (2018). Factors affecting the adoption of internet banking in Pakistan: an integration of technology acceptance model and theory of planned behaviour**.** *International Journal of Business Information Systems, 28(3)*, 342.
38. Hu, Z., Ding, S., Li, S., Chen, L., & Yang, S. (2019). Adoption Intention of Fintech Services for Bank Users: An Empirical Examination with an Extended Technology Acceptance Model**.** *Symmetry, 11(3)*, 340.
39. Lema, A. (2017). Factors influencing the adoption of mobile financial services in the unbanked

population. *Inkanyiso, Jnl Hum & Soc Sci*, *9,* 37-51.

40. Pandey, A., Kiran, R., & Sharma, R. K. (2022). Investigating the Impact of Financial Inclusion Drivers, Financial Literacy and Financial Initiatives in Fostering Sustainable Growth in North India. *Sustainability*, *14*(17), 1-21..
41. Kandpal, V., & Mehrotra, R. (2019). FINANCIAL INCLUSION: THE ROLE OF FINTECH AND DIGITAL FINANCIAL SERVICES IN INDIA. *Indian Journal of Economics & Business*, *19*(1), 85–93.
42. Goswami, S., Sharma, R. B., & Chouhan, V. (2022). Impact of Financial Technology(Fintech) on Financial Inclusion in Rural India. *Universal Journal of Accounting and Finance*, *10*(2), 483–497.
43. Siddiqui, T. A., & Siddiqui, K. I. (2020). FinTech in India: An analysis on impact of telecommunication on financial inclusion. *Strategic Change*, *29*(3), 321–330.
44. Gupta, U., Agarwal, B., & Nautiyal, N. (2022). Financial Technology Adoption — A Case of Indian MSMEs. *Finance Theory and Practice*, *26*(6), 192–211.
45. Brij,R., & Upadhyay,V. (2020). Role of FinTech in Accelerating Financial Inclusion in India.
46. Singh, S., Sahni, M.M., & Kovid, R.K. (2020). What drives FinTech adoption? A multi-method evaluation using an adapted technology acceptance model. *Management Decision*, *58*(8), 1675-1697.
47. Zhou, L. (2023, January 12). Small Business Statistics: The Ultimate List in 2023.
48. IBEF. (2022, October 7). INDIA'S MSME SECTOR.
49. Important Schemes. (2023, March 23). Retrieved from https://financialservices.gov.in/banking-divisions/Important-Schemes
50. *MICRO, SMALL AND MEDIUM ENTERPRISES*. (2022, November 3). Retrieved from https://invest.up.gov.in/msme/
51. The Micro Small and Medium Enterprise Development Act 2006. (n.d.). Retrieved from https://wbmsme.gov.in/what_msme#:~:text=MSME%20Definition,and%20building)%20and%20Annual%20Turnover.
52. Dubey, A. (2019, November 3). Read About the Types & State of Fintech Companies in India. Retrieved from https://enterslice.com/learning/types-and-state-of-fintech-companies-in-india/

53. Agarwal, A. (2022, November 21). RBI promoting financial inclusion through fintechs inIndia. Retrieved from https://www.financialexpress.com/money/rbi-promoting-financial- inclusion-through-fintechs-in-india/2872117/

54. About the Ministry. (2020, July 23). Retrieved from https://msme.gov.in/about-us/about-us-ministry

55. Ministry of Micro, Small and Medium Enterprises. (2023, April 14). Retrieved from https://en.wikipedia.org/wiki/Ministry_of_Micro,_Small_and_Medium_Enterprises

56. Post, B. (2021, April 8). How fintech boosts the progress of the MSME sector. Retrievedfrom Website of Hindustan Times: https://www.hindustantimes.com/brand-post/how- fintech-boosts-the-progress-of-the-msme-sector-101617871111634.html

57. Callo-Müller, M. V. (2020, December 23). MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) AND THE DIGITAL ECONOMY. Retrieved from Website of UNESCAP(United Nations Economic and Social Commission for Asia and the Pacific): https://www.unescap.org/sites/default/d8files/event-documents/MSMEs%20and%20the%20Digital%20Economy.pdf

58. Kulkarnie, O. (2023, January 27). 5 Ways How Fintech Is Revolutionizing MSMEs. Retrieved from https://www.entrepreneur.com/en-in/news-and-trends/5-ways-how-fintech- is-revolutionizing-msmes/443779#:~:text=Customized%20products%3A%20With%20the%20new,minimal%20documentation%20for%20MSME%20borrowers.

59. IBEF. (2022, September 19). MSMEs contribute 30% to India's GDP, to grow further: Mr.Narayan Rane. Retrieved from Website of IBEF (Indian Brand Equity Foundation): https://www.ibef.org/news/msmes-contribute-30-to-india-s-gdp-to-grow-further-mr- narayan-rane

60. Verma, N. (2018, July 2). Shodhgangotri Repository of Indian Research in Progress.Retrieved from Website of Shodhgangotri: http://shodh.inflibnet.ac.in:8080/jspui/handle/123456789/4512

61. Fintech. (2023, April 23). Retrieved from Website Of Wikipedia: https://en.wikipedia.org/wiki/Fintech

62. Shah, P. (2022, August 8). *How is the fintech sector in India poised for exponential growth?* Retrieved from Website of EY: https://www.ey.com/en_in/financial-services/how-is-the-fintech-

sector-in-india-poised-for-exponential-growth

63. Sengupta, A. (2023, February 1). *India has highest FinTech adoption rate, gains 3rd place in payments, highlights Economic Survey*. Retrieved from Website Of BFSI-Economic Times: https://bfsi.economictimes.indiatimes.com/budget/union-budget-2023/india-has-highest-fintech-adoption-rate-gains-3rd-place-in-payments-highlights-economic-survey/97495949
64. MINISTRY OF MICRO, S. A. (n.d.). *ANNUAL REPORT 2022-23*. Retrieved fromhttps://msme.gov.in/sites/default/files/MSMEANNUALREPORT2022-23ENGLISH.pdf
65. MSME-Development Institute, A. (. (n.d.). *Brief Industrial Profile Of District AGRA.*